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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,096	02/02/2004	Elizabeth Colbert	015291-088	5764
21839	7590	11/29/2006	EXAMINER	
BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404				SCHATZ, CHRISTOPHER
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 11/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/768,096	COLBERT, ELIZABETH
	Examiner	Art Unit
	Christopher T. Schatz	1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS,  
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 March 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 9-13 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)             |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/12/04, 5/4/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application   |
|   | 6) <input checked="" type="checkbox"/> Other: <u>IDS: 3/15/04</u> . |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Claims 1-8 in the reply filed on September 15, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 9-13 are withdrawn from consideration.

### ***Drawings***

2. Figure 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1733

Claims 1 and 4 recite that the foaming agent is admitted to the tube "so as to form a mixture of the compressed air and the foaming agent". It is unclear to the examiner if the formation of a mixture is requires a venturi jet pump upstream. As shown in figure 3, it appears that in order for the foaming agent to admitted and mixed with the compressed air, it is necessary for the compressed air to be applied via a venturi pump at the inlet in order to provide proper suction for the foaming agent. However, figure 3 is related to prior art and applicant never states in the specification that the compressed air is applied with a venturi pump. Thus it is unclear how the foaming agent can be admitted and mixed with the compressed air.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Camp et al. '155 in view of Stephens '665 and Gray '255.

Camp et al. discloses a method of combining a foamed substance with gypsum to form a gypsum slurry 9, and casting said slurry onto a continuous web for forming a gypsum board (figure 1). Camp et al. further discloses that formation of small foam bubbles is advantageous, but Camp et al. is silent as to the means of forming said bubbles. Stephens discloses a method of forming a foamed material to be applied to a cement like mixture, said foam formed by applying

Art Unit: 1733

compressed air to an input end of a smooth tube, wherein the tube includes the input end, an output end, admitting a foaming agent to the input end of the tube so as to form a mixture of the compressed air and the foaming agent; passing the mixture through the tube and out the output end; combining the mixture with other material to form a slurry (figure 4B, column 7, lines 55-60). Producing a foaming agent in such a way is advantageous because, as disclosed Stephens, said method produces large volumes of said foam in a continuous manner, and the process can be closely monitored and controlled (column 7, lines 10-20). The reference is silent as to a tapered region and a venturi between the inlet and outlet of the tube. Gray discloses a method of foaming a material, comprising: mixing a foaming agent and compressed air; passing the mixture through a tapered region and a venturi. Gray further discloses that passing said compressed air and foam through a tapered region and a venturi aids in the production of fine, small bubbles in the foam (column 6, lines 54-64). At the time of the invention it would have been obvious to a person of ordinary skill in the art to produce the foamed material used the method of Camp et al. by the process taught by Stephens. Furthermore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Stephens by using a tube with a tapered region and venturi downstream of the air and foam inlets as taught by Gray et al. above. Such a modification would produce fine, small, foam bubbles.

As to claim 2, Gray et al. discloses a tapered region wherein the diameter of the opening decrease before the venturi (figure 4). As to claim 3, one of ordinary skill in the art would have readily determined to decrease the diameter over a length of at least six inches through routine experimentation as only the expected results would be obtained. As to claim 6, Gray et al. discloses a method further comprising the step of adjusting the size of bubbles in the mixture

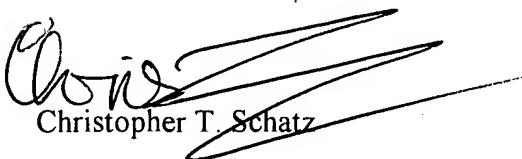
output from the tube by adjusting a pressure of the air applied to the tube (column 6, lines 41-64). As to claim 7, examiner asserts the it well known in the art to use a non-protenaceous surfactant.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Christopher T. Schatz** whose telephone number is **571-272-1456**. The examiner can normally be reached on 8:00-5:30, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Christopher T. Schatz



RICHARD CRISPINO  
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